

**UNIVERSITI TEKNOLOGI MARA**

**THE DEVELOPMENT OF FRAMEWORK IN  
SOFTWARE IMPLEMENTATION TO ENHANCE  
CONTRACTOR'S CONSTRUCTION COST  
ESTIMATE**

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Thesis submitted in fulfillment  
of the requirements for the degree of  
**Master of Science**

**Faculty of Architecture, Planning & Surveying**

January 2015

**AUTHOR'S DECLARATION**

I declare that the work in the thesis was carried out in accordance with the regulations of University Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic or non-academic institution for any degree or qualification.

I, hereby, acknowledged that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

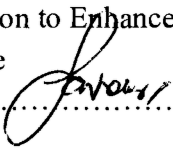
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## **ABSTRACT**

It has been argue that the adoption of Construction Cost Estimate (CCE) software has failed to make positive impact towards construction cost estimating performance. It is also has been argued that the software are under-utilized due to its inefficiency in terms of difficulty, cost and does not match with the company's style of cost estimating and measurement works. It was also found that improper attention to the human aspects of implementing technology has been identified as a primary cause of technology implementation failure. Therefore, this research is objectively designated to explore the current usage of CCE software features and user's diffusion factors towards cost estimating and measurement performance in order to achieve the aim which is to establish a framework to further improve the CCE software implementation by contractors in Malaysia. Both qualitative and quantitative methods of obtaining data were used in this research. A preliminary questionnaire survey was conducted initially, followed by semi-structured interview to focus the exploration into problems issues. The final postal questionnaire was distributed to 82 contractors who are consists of CCE software users, there were only 63 replied the questionnaire and from that, only 58 are completely answer and valid. Meanwhile, 20 existing respondents were selected to be participated during the interview. The study found that sub contractors and supplier were refused to respond the online quotation, the cost estimating check is inaccurate enough to verify the prices according to the project location and missing item during measurement, the automated generated summary cost estimating report was less flexible to meet the contractor's desire, difficult to get softcopy bill of quantities and drawings, no special department existed so far to manage the library and databases, and limited elemental of list available. Furthermore, it was also found that the employers did not adapt norm of cooperation in doing sharing knowledge, did not offer future benefits to those who strongly share their experts and knowledge to others, did not provide intangible rewards, and did not provide appropriate training and there is no clear benefit of CCE software implementation. Therefore, in order to improve the CCE software implementation towards better performance, identified problems of CCE software features and CCE software diffusion factors must be fixed by relevant parties.

## **ACKNOWLEDGEMENT**

Praise to Allah S.W.T, Creator of the universe. I manage to complete this thesis for my Master study.

I would like to express my gratitude and highest appreciation to my supervisor, Dr Emma Marinie Ahmad Zawawi for her valuable supervision, advise and guidance to complete this thesis. The big thanks and most sincere appreciation also given to staff of Universiti teknologi MARA for their kind assistance during the process of completing this thesis.

Lastly, to my family especially both of my parents Mohd Mukelas bin Manijo and Ngatiah binti Sanusi, siblings and friends for their moral supports and encouragement to complete this journey. The appreciation also given to my employer Universiti Teknologi MARA, Kampus Kota Samarahan, Sarawak, Department of Building (AP116), which became my backbone to give me special time in preparing and completing my thesis during my working hours.

## **TABLE OF CONTENT**

|                           | <b>Page</b> |
|---------------------------|-------------|
| <b>AUTHOR DECLARATION</b> | <b>ii</b>   |
| <b>ABSTRACT</b>           | <b>iii</b>  |
| <b>ACKNOWLEDGEMENT</b>    | <b>iv</b>   |
| <b>TABLE OF CONTENT</b>   | <b>v</b>    |
| <b>LIST OF TABLE</b>      | <b>x</b>    |
| <b>LIST OF FIGURE</b>     | <b>xiii</b> |
| <b>LIST OF EQUATION</b>   | <b>xv</b>   |

### **CHAPTER ONE: INTRODUCTION**

|  |           |
|--|-----------|
| <b>1.1 BACKGROUND OF THE RESEARCH</b>  | <b>1</b>  |
| <b>1.2 STATEMENT OF RESEARCH PROBLEMS</b>  | <b>3</b>  |
| 1.2.1 Issues On The Current Usage Of CCE Software By Contractors And The<br>Features Contributing To CCE Performance | 4         |
| 1.2.2 Issues On The Effect Of CCE Diffusion Towards CCE Performance  | 4         |
| 1.2.3 Issues On Establishment Of A Framework To Further Improve CCE<br>Performance Through Enhancing CCE Software    | 5         |
| <b>1.3 RESEARCH'S AIM AND OBJECTIVES</b>   | <b>6</b>  |
| <b>1.4 RESEARCH METHODOLOGY</b>  | <b>7</b>  |
| 1.4.1 Sampling Frame   | 7         |
| 1.4.2 Targeted Area  | 7         |
| 1.4.3 Targeted Respondent  | 7         |
| 1.4.4 Literature Review  | 8         |
| 1.4.5 Cross-Sectional Survey   | 8         |
| 1.4.6 Semi-Structured Interviews   | 8         |
| <b>1.5 SIGNIFICANCE OF THE RESEARCH</b>  | <b>9</b>  |
| <b>1.6 CONCEPTUAL FRAMEWORK FOR THIS RESEARCH</b>  | <b>10</b> |